ABSTRACT

An inspection apparatus by an electron beam comprises: an electron-optical device 70 having an electron-optical system for irradiating the object with a primary electron beam from an electron beam source, and a detector for detecting the secondary electron image projected by the electron-optical system; a stage system 50 for holding and moving the object relative to the electron-optical system; a mini-environment chamber 20 for supplying a clean gas to the object to prevent dust from contacting to the object; a working chamber 31 for accommodating the stage device, the working chamber being controllable so as to have a vacuum atmosphere;

at least two loading chambers 41,42 disposed between the mini-environment chamber and the working chamber, adapted to be independently controllable so as to have a vacuum atmosphere; and a loader 60 for transferring the object to the stage system through the loading chambers.